

# KV-1340E

Chassis No. SCC-89A-A



**TRINITRON®  
COLOUR TV**

This manual contains the supplement No. 1.

## SPECIFICATIONS

<b>TV-signal standards:</b>	CCIR system B, G and H	<b>Automatic controls:</b>	AGC (automatic gain control) AFC (automatic frequency control) ANC (automatic noise canceller) ABL (automatic brightness limiter) ACC (automatic colour control) ACK (automatic colour killer) ADG (automatic degaussing)
<b>Colour system:</b>	PAL	<b>Power requirements:</b>	220 V AC, 50 Hz
<b>Picture tube:</b>	13", 33 cm (measured diagonally), 90° deflection TRINITRON system	<b>Power consumption:</b>	78 W
<b>Semiconductors:</b>	69 transistors, 64 diodes and 1 IC	<b>Dimensions:</b>	340 (w) x 347 (h) x 402 (d) mm
<b>Aerials:</b>	VHF } 75 Ω unbalanced UHF }	<b>Net weight:</b>	13.5 kg
<b>Channel coverage:</b>	VHF; E2~4 ch E5~12 ch UHF; E21~68 ch	<b>Accessories:</b>	Earpiece (ME-20B) Instruction manual
<b>Intermediate frequencies:</b>	Picture i-f carrier; 38.9 MHz Colour subcarrier; 34.47 MHz Sound i-f carrier; 33.4 MHz	<b>Anode voltage:</b>	21.5 kV at zero beam current 20 kV at 0.4 mA beam current
<b>Sound system:</b>	5.5 MHz intercarrier Output power: 1.2 W (at 10 % harmonic distortion) Speaker: 8 x 12 cm oval, 8 Ω	<b>Hochspannung:</b>	21.5 kV bei 0 mA Strahlstrom 20 kV bei 0.4 mA Strahlstrom
<b>Video system:</b>	RGB cathode drive		

Geprüft Nach Röntgenverordnung V.1.3.76:  
Zulassungsschein Nr: HH/7/76/RÖ

**SONY®**  
**SERVICE MANUAL**



## X-RAY RADIATION WARNING!!

BE SURE THAT PARTS REPLACEMENT IN THE HIGH VOLTAGE BLOCK AND ADJUSTMENTS MADE TO THE HIGH VOLTAGE CIRCUITS ARE CARRIED OUT PRECISELY IN ACCORDANCE WITH THE PROCEDURES GIVEN IN THIS MANUAL.

## WARNUNG VOR RÖNTGENSTRAHLEN!!

ES MUSS GARANTIIERT WERDEN, DASS DER AUSTAUSCH VON BAUTEILEN UND EINSTELLUNGEN IM HOCHSPANNUNGSTEIL MIT GRÖSSTER SORGFALT AUSGEFÜHRT WERDEN UND SICH GENAU NACH DER VORSCHRIFT DIESER SERVICEANLEITUNG RICHTEN.

DIE BESCHLEUNIGUNGSSPANNUNG DARF NICHT ERHÖHT WERDEN, DAMIT KEINE SCHÄDLICHEN RÖNTGENSTRAHLUNGEN ERZEUGT WERDEN. SIE SOLL  $21.5\text{kV} \pm 1.0\text{kV}$  BETRAGEN.

## WARNING!!

THIS CHASSIS OPERATES WITH ONE SIDE OF THE POWER LINE CONNECTED TO THE CHASSIS. TO ELIMINATE SHOCK HAZARD AND PROTECT EQUIPMENT WHEN SERVICING THE SET WITH THE COVERS REMOVED, MAKE SURE THAT THE SET IS PLUGGED INTO A SUITABLY-RATED ISOLATION TRANSFORMER.

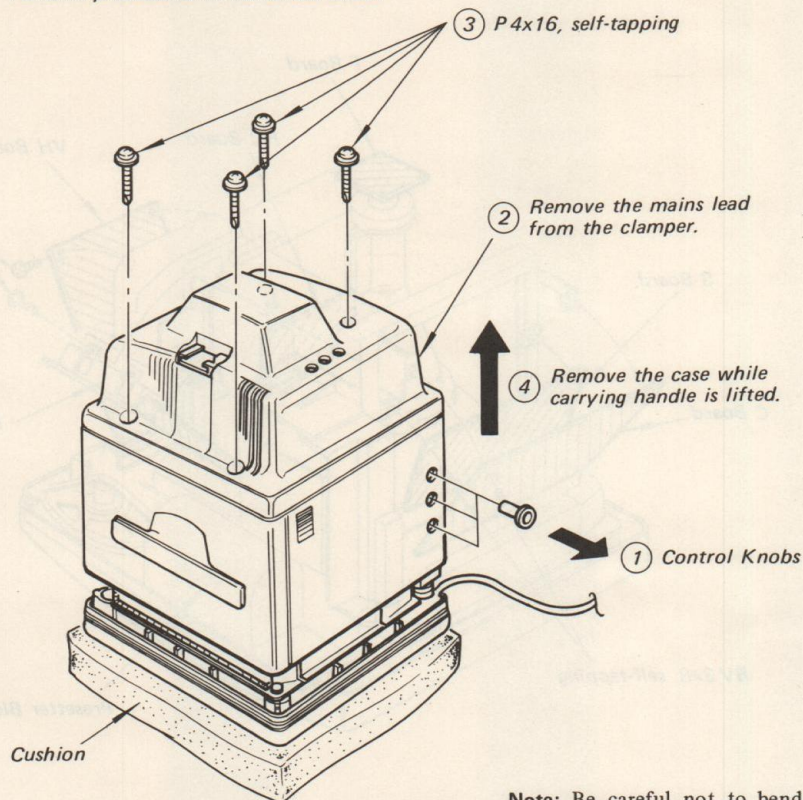
TV signal standards	CCIR system B, G and H	Automatic gain control	AGC (automatic gain control)
Colour system	PAL	Automatic frequency control	AFC (automatic frequency control)
Picture tube	17" 33cm (measured diagonally) 90° deflection TRINITRON system	Automatic noise canceler	ANC (automatic noise canceler)
Semiconductors	69 transistors, 84 diodes and 1 IC	Automatic brightness limiter	ABL (automatic brightness limiter)
Antenna	VHF: 75 Ω unbalanced UHF: 75 Ω unbalanced	Automatic colour killer	ACK (automatic colour killer)
Channel coverage	VHF: E2-E8 UHF: E2-E8	Automatic degaussing	ADD (automatic degaussing)
Intermediate frequencies	Picture IF carrier: 38.9 MHz Colour subcarrier: 34.4 MHz Sound IF carrier: 33.4 MHz	Power requirements	230V AC, 50 Hz
Sound system	6.5 MHz intercarrier Output power: 1.2W (at 10% harmonic distortion) Speaker: 8 x 12cm oval, 8 Ω	Power consumption	18W
Video system	RGB cathode drive	Dimensions	340 (W) x 347 (H) x 402 (D) mm
		Net weight	13.8 kg
		Accessories	Erspiece (ME-208) Instruction manual
		Anode voltage	21.5 kV at zero beam current 20 kV at 0.4 mA beam current
		High voltage	21.5 kV bei 0 mA Strahlstrom 20 kV bei 0.4 mA Strahlstrom



## SECTION 3 DISASSEMBLY

### 3-1. CASE REMOVAL

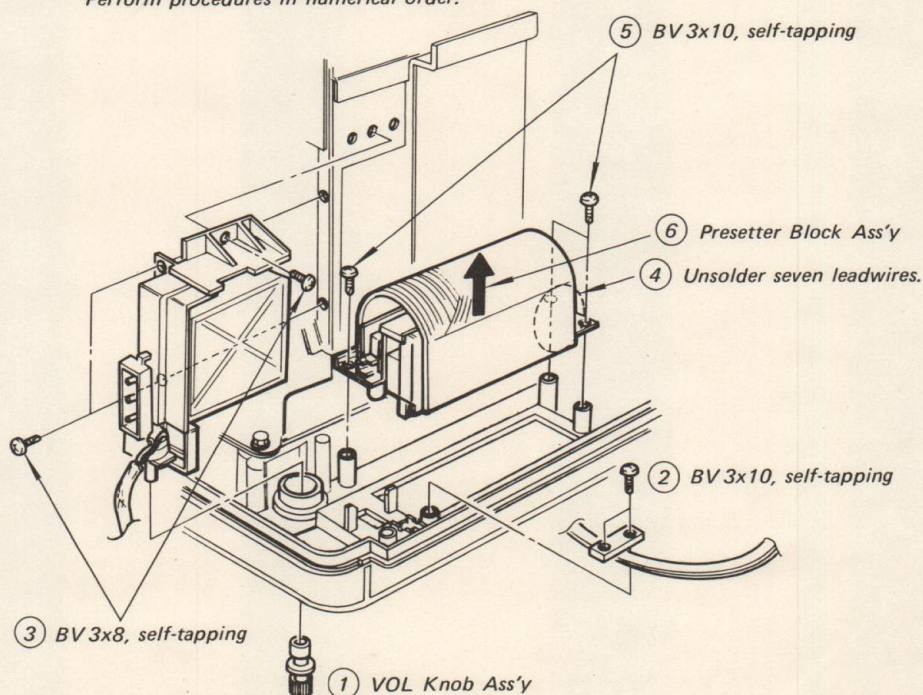
Perform procedures in numerical order.



**Note:** Be careful not to bend V.HOLD knob with the case when reassembling the set.

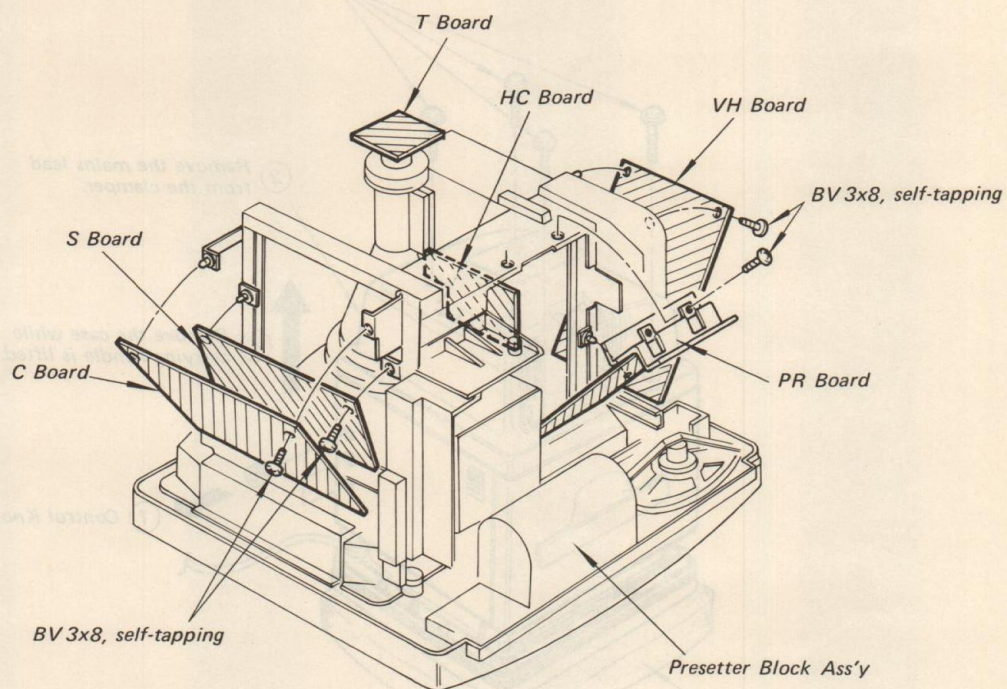
### 3-2. PRESETTER BLOCK ASS'Y REMOVAL

Perform procedures in numerical order.





### 3-3. CIRCUIT BOARDS REMOVAL



**Note:** When POWER switch is turned ON, do not touch the PR board to the Presetter Block Ass'y.



# SECTION 1 BLOCK DIAGRAM

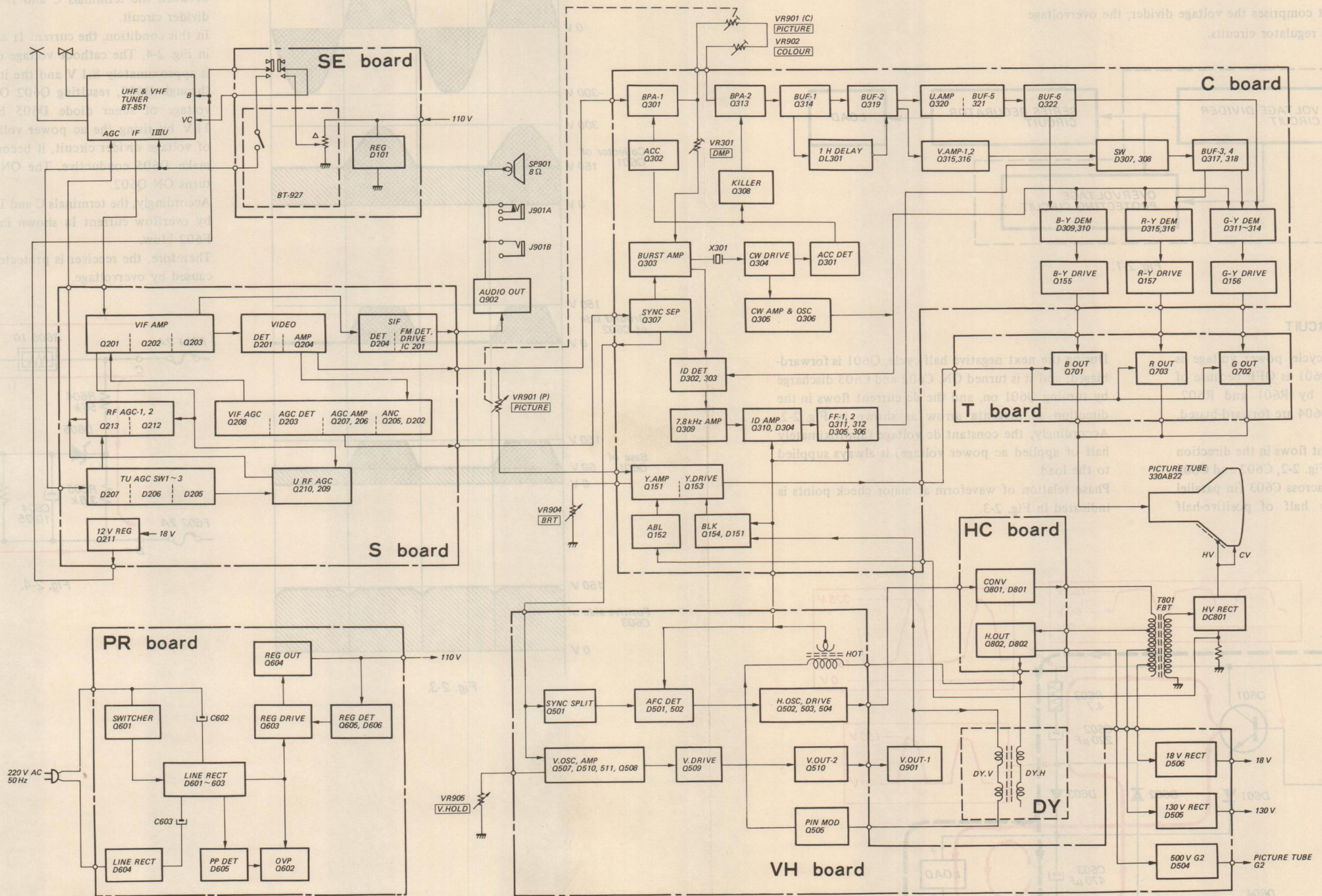


Fig. 1-1.



## SECTION 2

### NEWLY ADOPTED CIRCUIT DESCRIPTION

#### Power Supply Circuit

The power supply circuit comprises the voltage divider, the overvoltage protecting and the series regulator circuits.

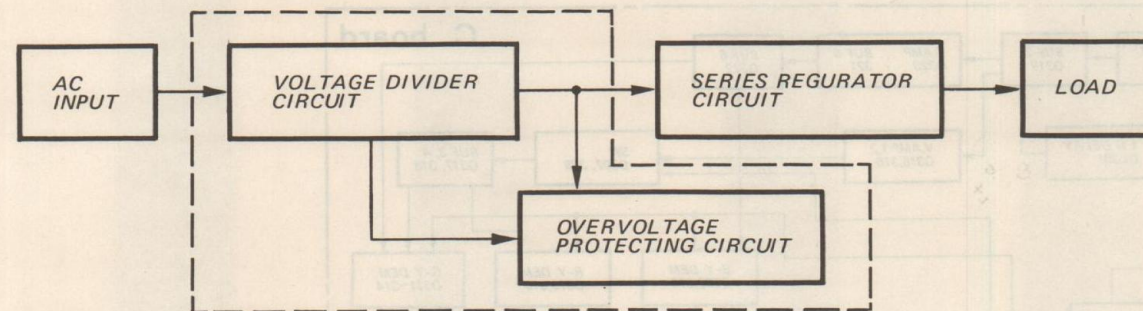


Fig. 2-1.

#### 1. VOLTAGE DIVIDER CIRCUIT

When the positive half-cycle power voltage is applied to the terminal A, Q601 is OFF because of the bias voltage determined by R601 and R602. While, the diodes D603 and D604 are forward-biased, they are turned ON.

As a result, the rectified current flows in the direction of dotted arrow as shown in Fig. 2-2, C602 and C603 are charged. The dc voltage across C603 (in parallel with load) is approximately half of positive-half cycle power voltage applied.

During the next negative half-cycle, Q601 is forward-biased, and it is turned ON. C602 and C603 discharge by turning Q601 on, and the dc current flows in the direction of magenta arrow as shown in Fig. 2-2. Accordingly, the constant dc voltage (approximately half of applied ac power voltage) is always supplied to the load.

Phase relation of waveform at major check points is indicated in Fig. 2-3.

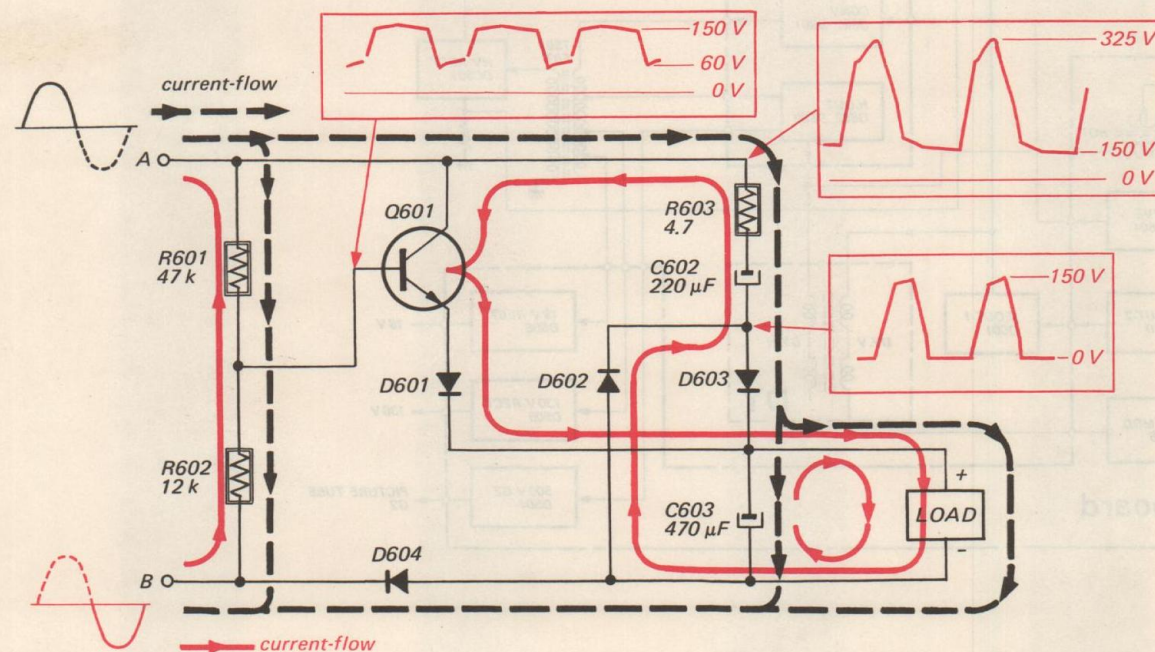


Fig. 2-2.

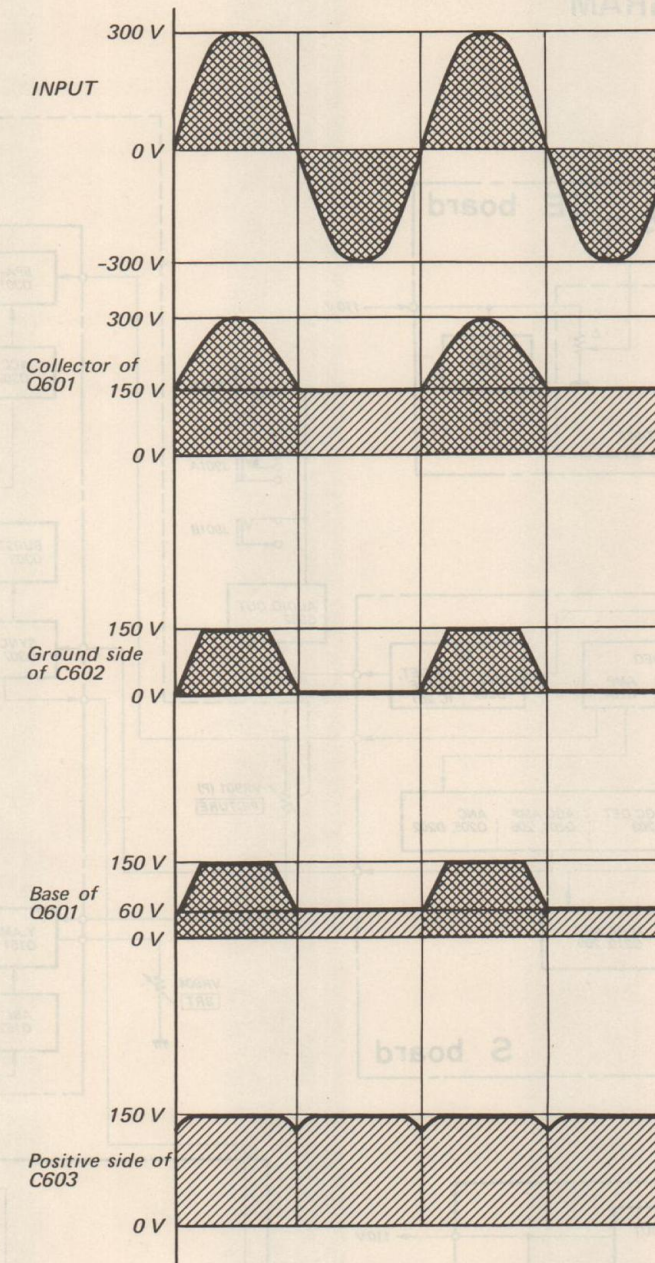


Fig. 2-3.

#### 2. OVERVOLTAGE PROTECTING CIRCUIT

Normally, approximately 138V dc is applied between the terminals C and D through the voltage divider circuit.

In this condition, the current I1 and I2 flow as shown in Fig. 2-4. The cathode voltage of zener diode D605 is approximately 8.1V and the its anode is grounded through R607, resulting Q602 OFF. If the cathode voltage of zener diode D605 becomes more than 11V by rising the ac power voltage, or the trouble of voltage divider circuit, it becomes high enough to make D605 conductive. The ON situation of D605 turns ON Q602.

Accordingly, the terminals C and D are short-circuited by overflow current I3 shown in Fig. 2-4, F601 and F602 blow.

Therefore, the receiver is protected from the damage caused by overvoltage.

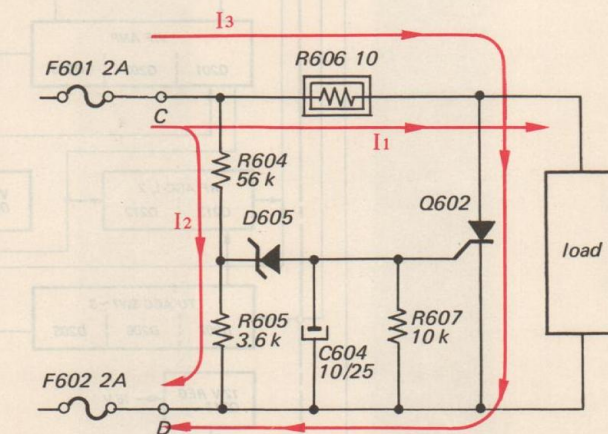


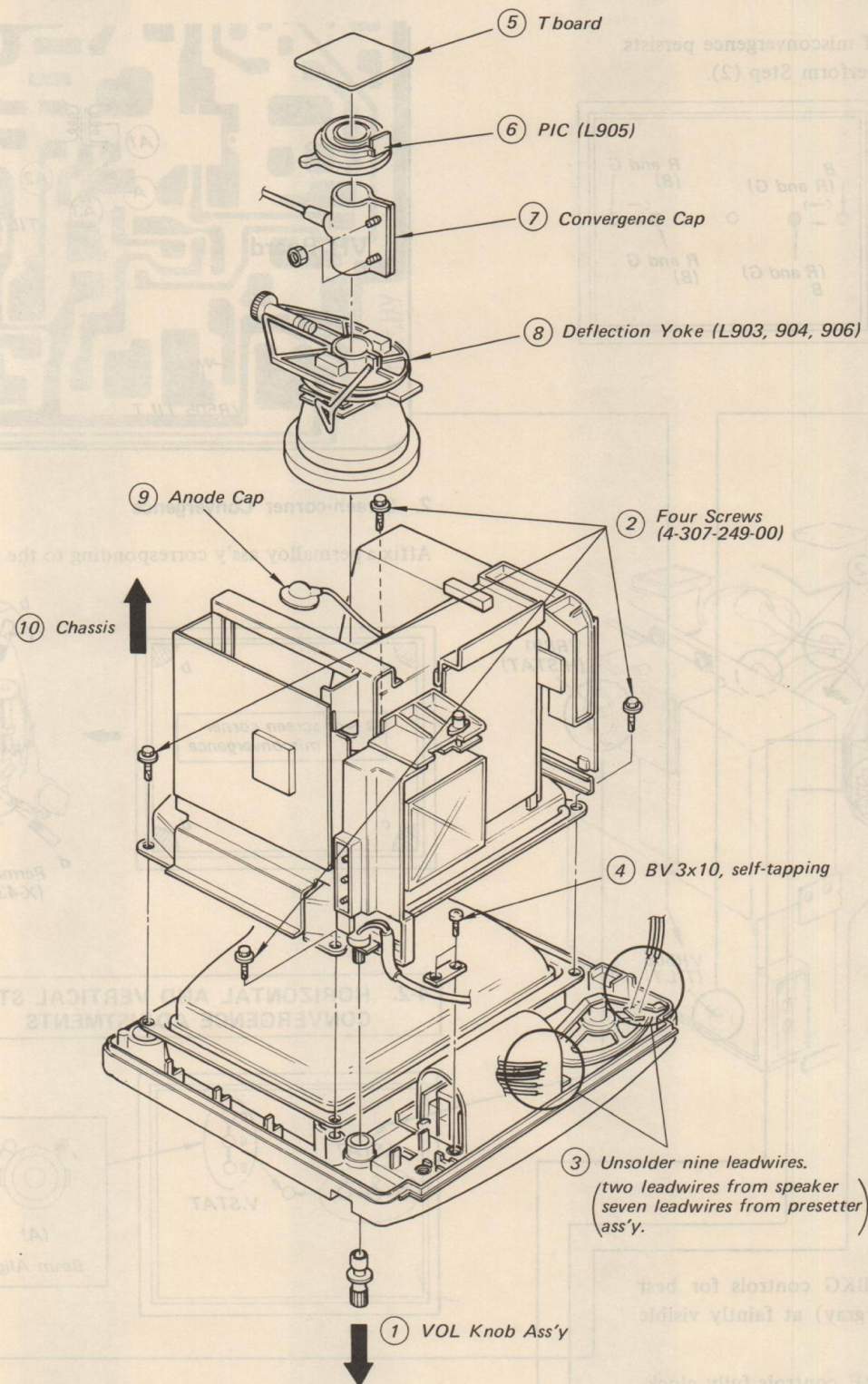
Fig. 2-4.



## MEMO

## 3-4. PICTURE TUBE REMOVAL

Perform procedures in numerical order.





## SECTION 4 SETUP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

Controls should be set as follows:

BRT, PICTURE controls ..... fully clockwise

### 4-1. BEAM LANDING ADJUSTMENTS

Receive no signal.

Before starting this adjustment, demagnetize the whole screen securely with degausser.

- Loosen deflection yoke screw.
- Remove deflection yoke spacers.
- Adjust purity control to centre the slide between two projections as shown in Fig. 4-1.
- Slide deflection yoke forward as far as it will go.
- Disconnect BLU and GRN lead wires on the T board.
- Turn purity control to centre vertical red band as shown in Fig. 4-2.
- Slide deflection yoke backward for a uniform red screen.
- Check green and blue rasters for uniformity. Repeat the Steps 5, 6 and 7.
  - To get a uniform green screen  
..... Connect green lead on the T board.  
Disconnect red and blue leads.
  - To get a uniform blue screen  
..... Connect blue lead on the T board.  
Disconnect red and green leads.
- After these checks, connect the RED, BLU and GRN leads.
- Check if mislanding appears at corners a~d as shown in Fig. 4-3. If mislanding is observed, correct it as shown in Fig. 4-4.
- Tighten the deflection yoke screw and then put the deflection yoke spacers.

### 4-4. WHITE BALANCE ADJUSTMENTS

Receive the crosshatch pattern.

- Turn BRT and PICTURE controls fully counter-clockwise.
- Turn VR155 (R.DRIVE), VR151 (B.DRIVE) and VR153 (G.DRIVE) fully clockwise.

Perform the adjustments in order as follows:

- Beam Landing Adjustments
- Convergence Adjustments
- White Balance Adjustments

**Note:** Test Equipment Required

- Colour-bar/pattern generator
- Degausser

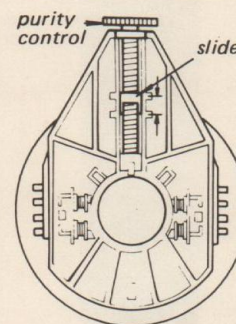


Fig. 4-1.

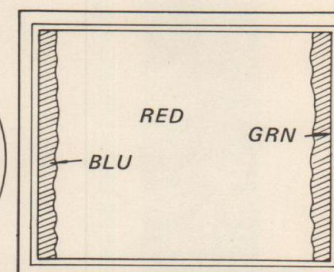


Fig. 4-2.

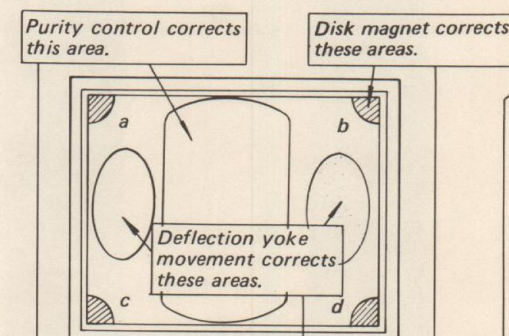


Fig. 4-3.

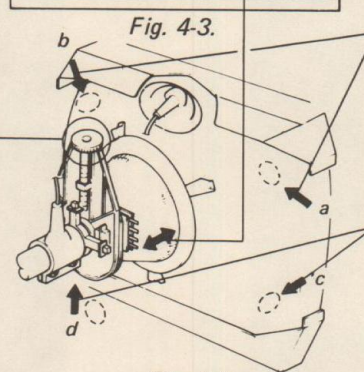
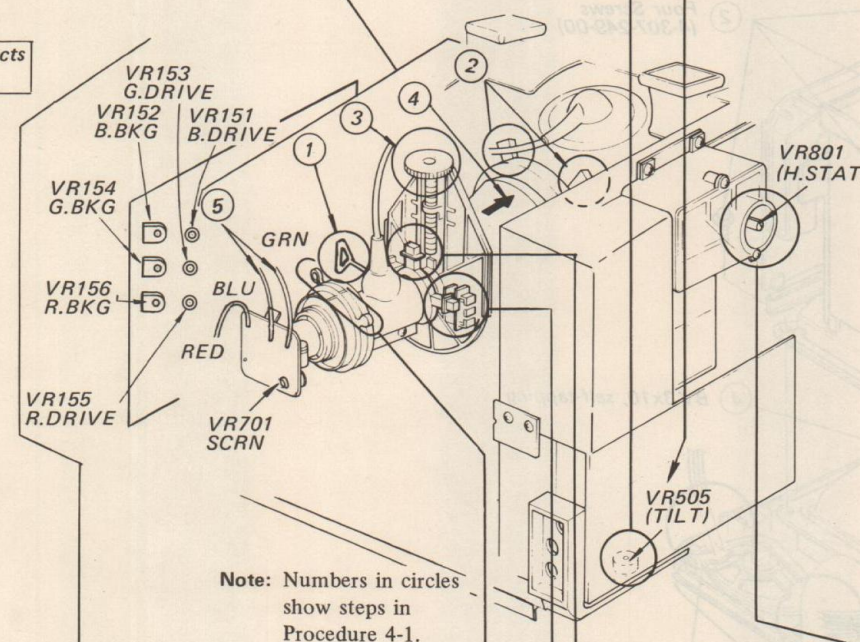


Fig. 4-4.



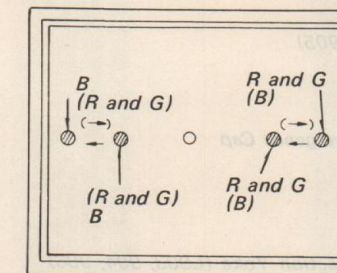
### 4-3. DYNAMIC CONVERGENCE ADJUSTMENTS

Receive the dot pattern.

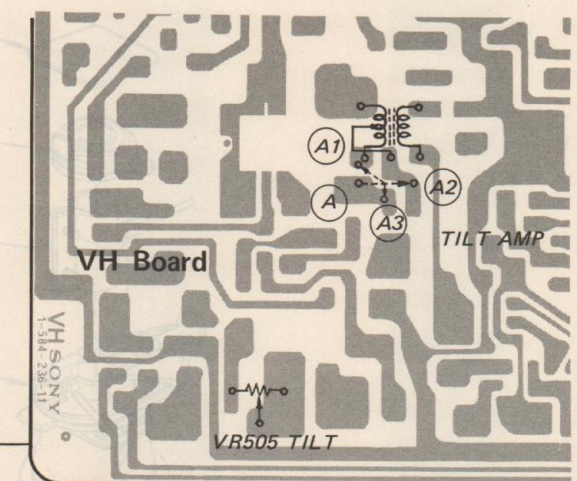
#### 1. Misconvergence at Both Sides of Screen

- Adjust VR505 (TILT).

If misconvergence persists, perform Step (2).

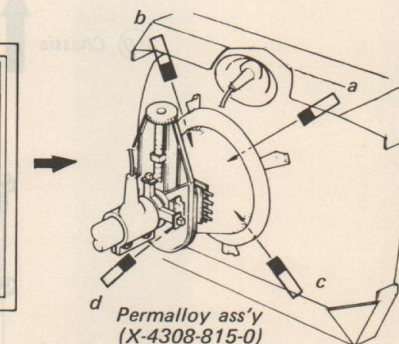
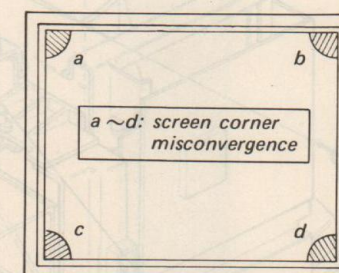


- Select one of A1~A3 for best convergence.

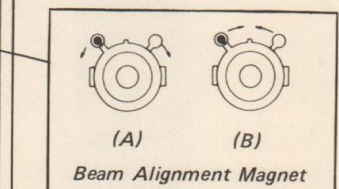
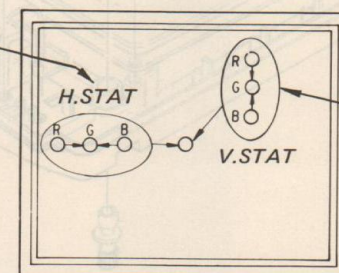


#### 2. Screen-corner Convergence

Affix a permalloy ass'y corresponding to the misconverged areas.



### 4-2. HORIZONTAL AND VERTICAL STATIC CONVERGENCE ADJUSTMENTS



HMC magnet movement corrects insufficient H.static convergence.

VMC magnet movement corrects insufficient V.static convergence.

- Adjust the other two BKG controls for best white balance (neutral gray) at faintly visible screenlight.
- Turn BRT and PICTURE controls fully clockwise. Observe the screen and adjust the DRIVE controls for best white balance.
- Repeat Steps 1 through 6 several times.



## SECTION 5

### CIRCUIT ADJUSTMENTS

Note:

#### (1) TEST EQUIPMENT REQUIRED

1. Oscilloscope
2. Voltmeter (VOM)
3. Colour-bar/pattern generator

#### (2) RECEIVING SIGNAL

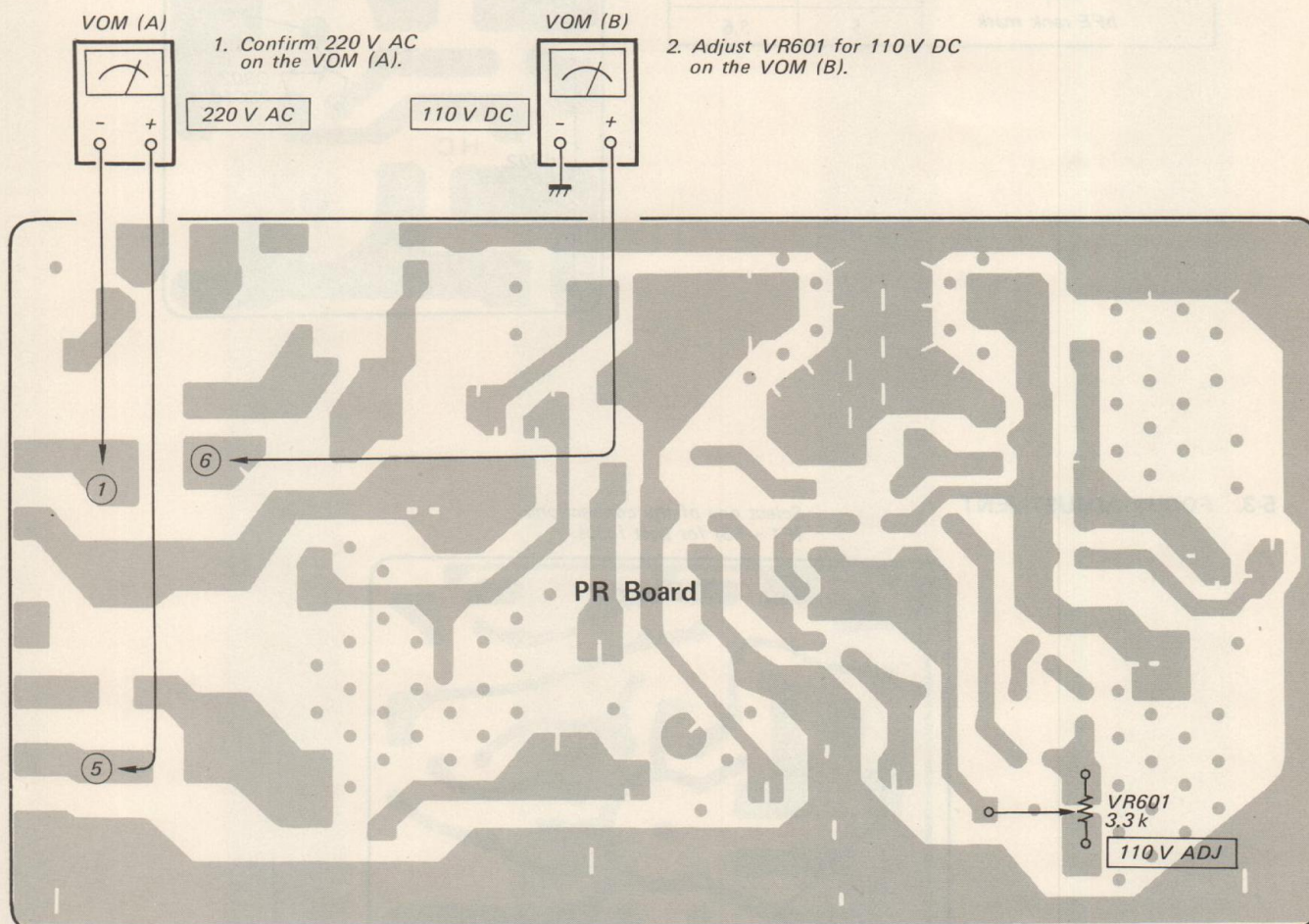
When performing these adjustments, receive any of a crosshatch signal, a colour-bar signal or an off-the-air signal.

#### (3) CONTROL SETTING FOR CHECKS AND ADJUSTMENTS

Controls should be set as follows when performing checks and adjustments.

PICTURE control  
BRT control  
COLOUR control  
..... Set for best picture  
V.HOLD control  
..... Set for stable picture


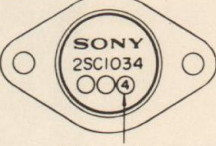
#### 5-1. 110 V (B+) ADJUSTMENT

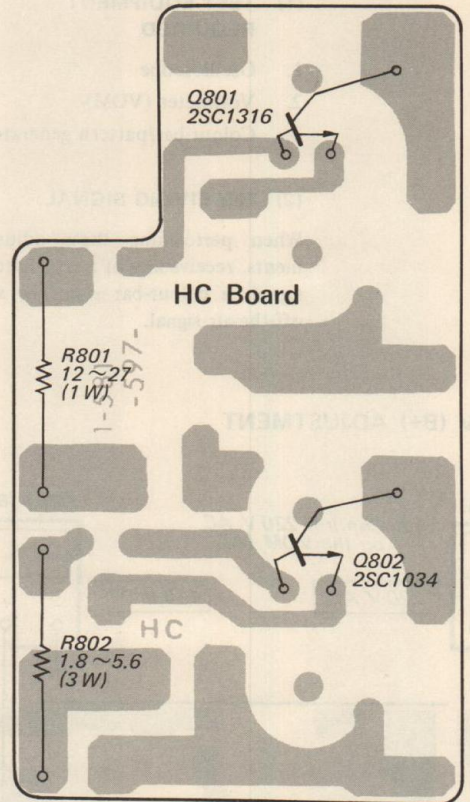




## 5-2. H.OUT AND H.CONV DRIVE ADJUSTMENT

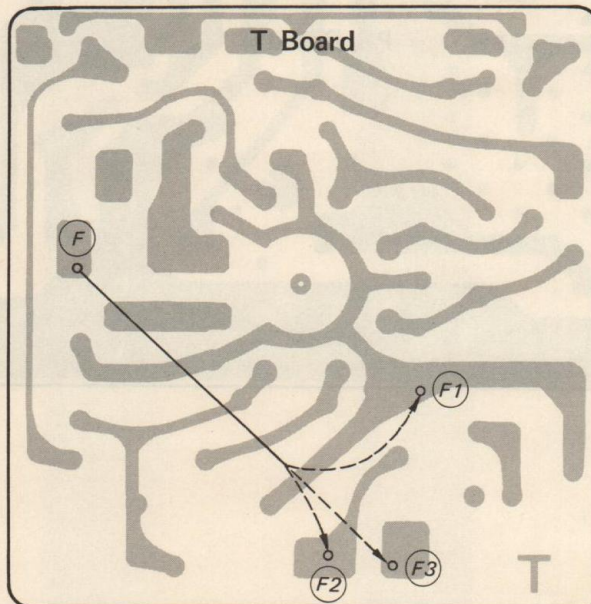
When replacing transistor Q801 or Q802, select resistance value of R801 or R802 according to hFE rank of them as shown in table.

Q801  hFE rank mark	hFE rank of Q801	R801 ( $\Omega$ )
	2	12
	3	15
	4	18
	5	27
Q802  hFE rank mark	hFE rank of Q802	R802 ( $\Omega$ )
	2	1.8
	3	2.7
	4	4.7
	5	5.6



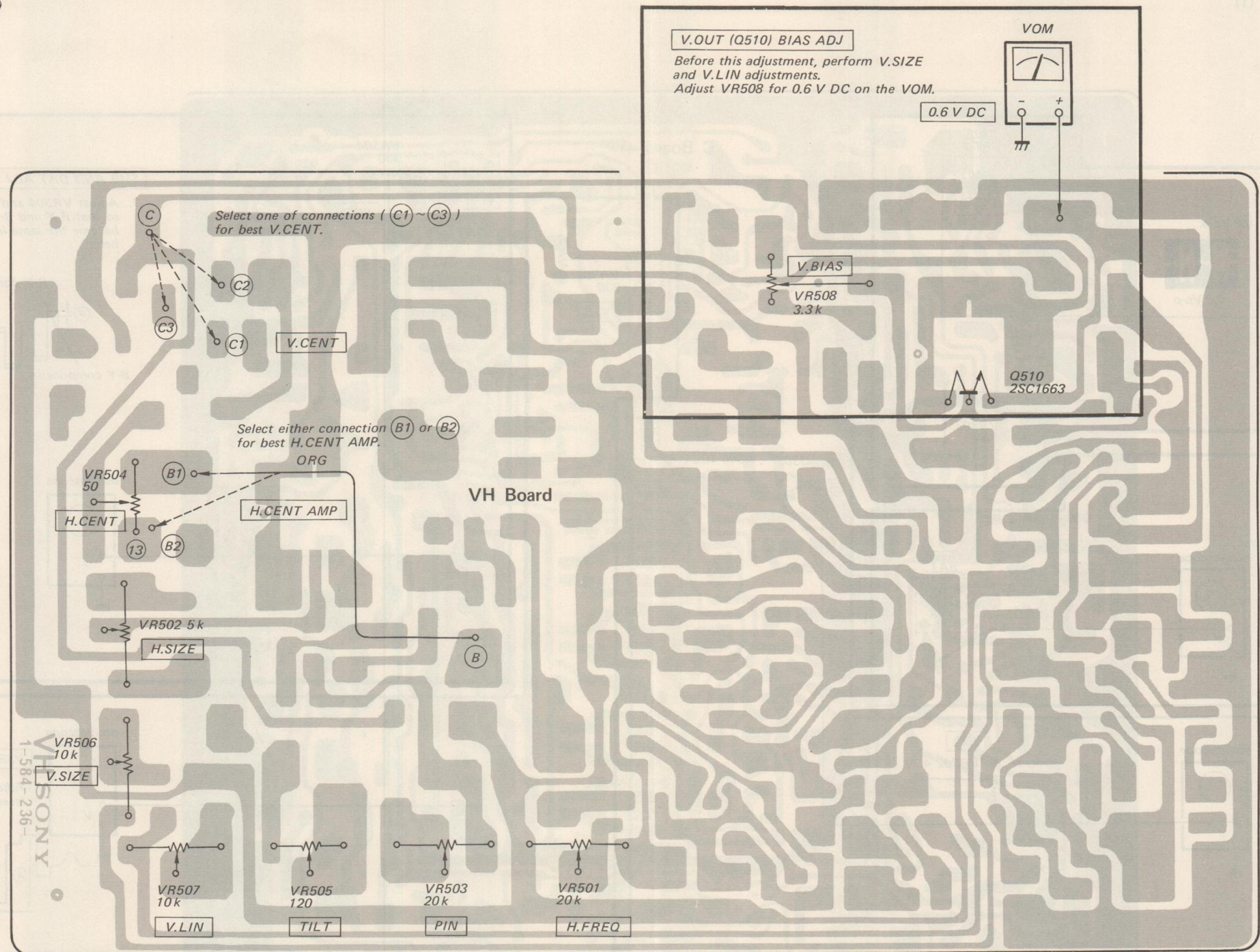
## 5-3. FOCUS ADJUSTMENT

Select one of the connections (F1~F3) for best focus.



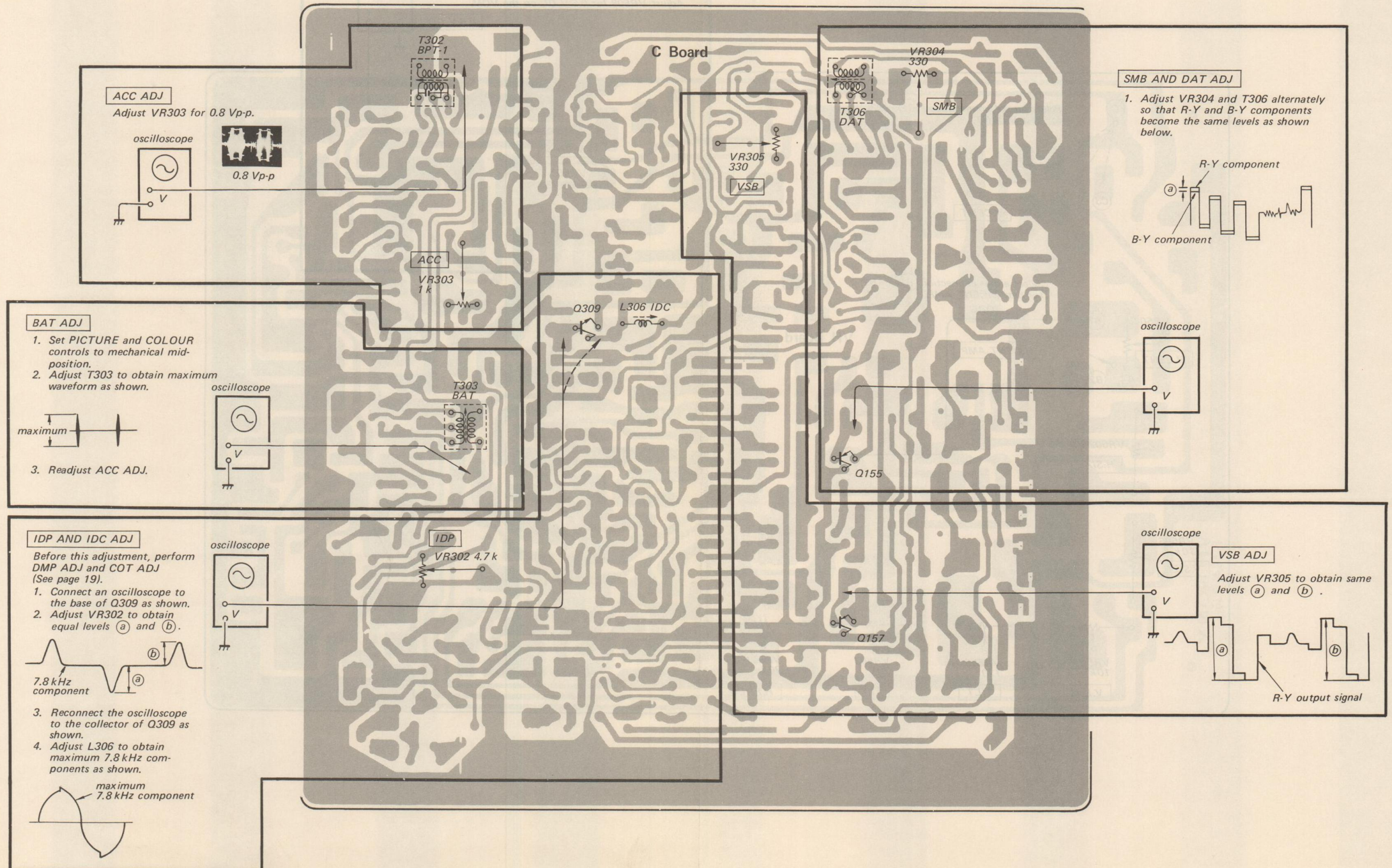


## 5-4. ADJUSTMENTS ON VH BOARD





## 5-5. ADJUSTMENTS ON C BOARD (1)

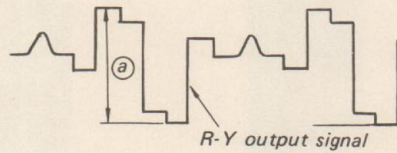




## 5-6. ADJUSTMENTS ON C BOARD (2)

**DMP ADJ**

Adjust VR301 to obtain the maximum R-Y output marked (a) as shown below.



VR301  
3.3k  
DMP

C Board

**COT ADJ**

1. Temporarily connect a ceramic capacitor (0.01  $\mu$ F, 50 V) as shown.
2. Adjust T304 to synchronize the colour picture.

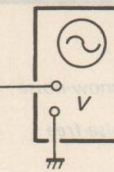
**Note:**

After this adjustment, disconnect the ceramic capacitor.

0.01  
VR302

T304  
COT

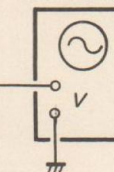
oscilloscope



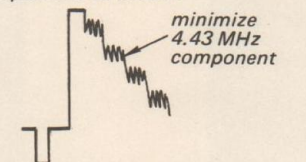
L154  
4.43 MHz  
TRAP

Q153

oscilloscope

**4.43 MHz TRAP ADJ**

Adjust L154 to minimize 4.43 MHz components as shown.



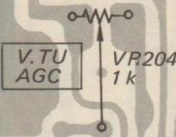


5-7. ADJUSTMENTS ON S BOARD

S Board

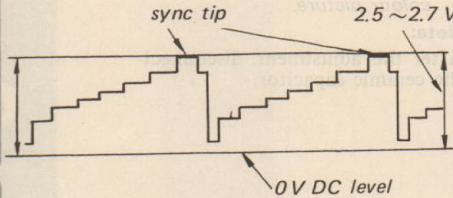
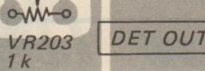
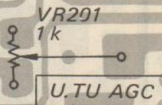
VHF TUNER AGC ADJ

1. Set VR204 to position where snow-noise just disappears.
2. Check all VHF channels for noise-free reception.



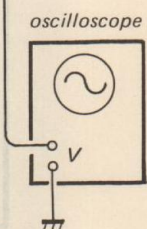
UHF TUNER AGC ADJ

1. Set VR201 to position where snow-noise just disappears.
2. Check all UHF channels for noise-free reception.



DET OUT ADJ

Adjust VR203 for 2.5 ~ 2.7 V as shown.



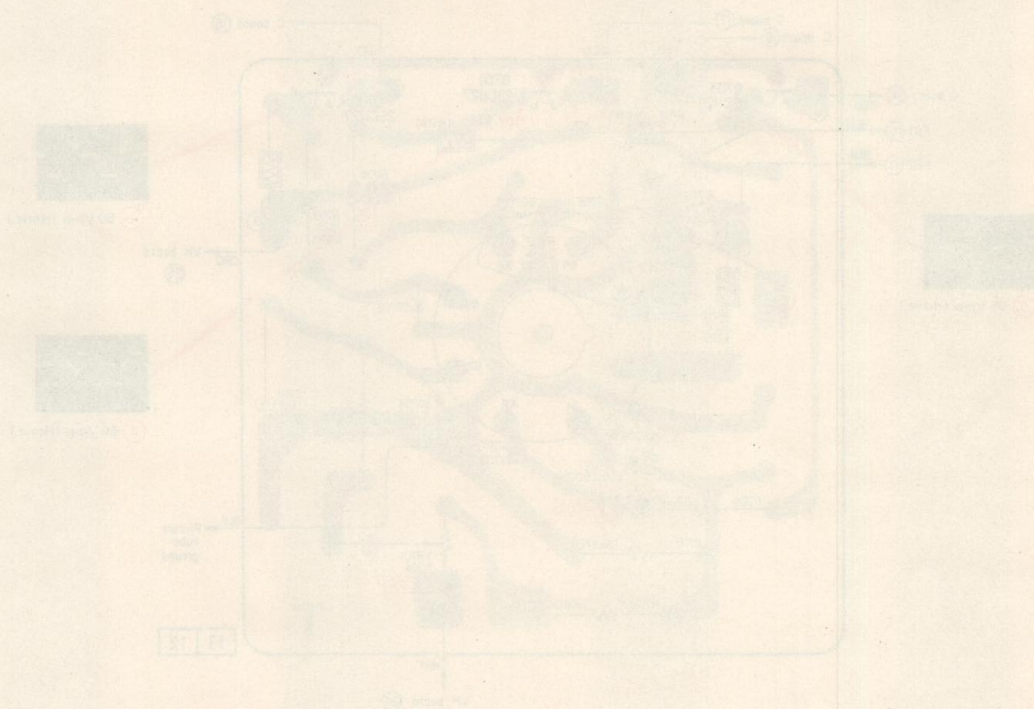


# MEMO

## SECTION 8 DIAGRAMS

### 8-1. MOUNTING DIAGRAMS

Note: -- Indicates wire connection -- refers to the conductor side.  
 -- Indicates parts of wire connection point on the component side.  
 All mounting diagrams are conducted in view.  
 -- Indicates parts on the conductor side.  
 -- Indicates a non-adjustable resistor.  
 -- Indicates a variable resistor.  
 -- Indicates parts to be selected as with optimum performance.  
 All variable and adjustable resistors have characteristic curve S unless otherwise noted.







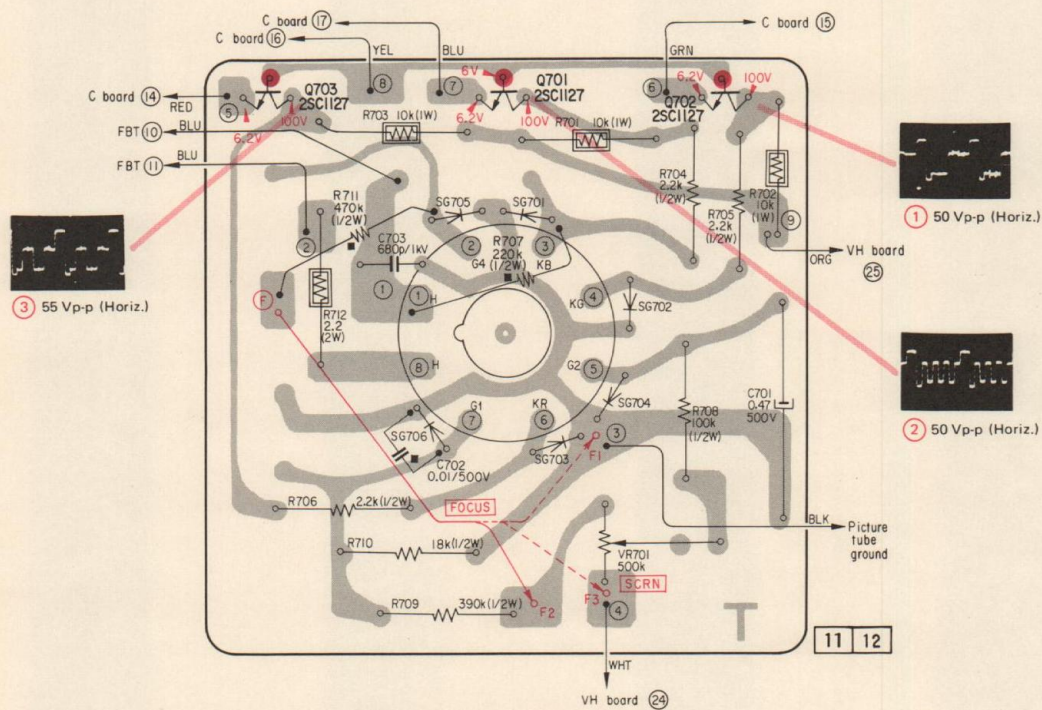
## SECTION 6 DIAGRAMS

MEMO

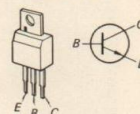
### 6-1. MOUNTING DIAGRAMS

- Note:** ● indicates wire connection point on the conductor side.  
○ indicates parts or wire connection point on the component side.  
All mounting diagrams are conductor side view.
- indicates parts on the conductor side.
  -  indicates a nonflammable resistor.
  -  indicates a fusible resistor.
  - ❖ indicates parts to be selected to yield optimum performance.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

— T Board —

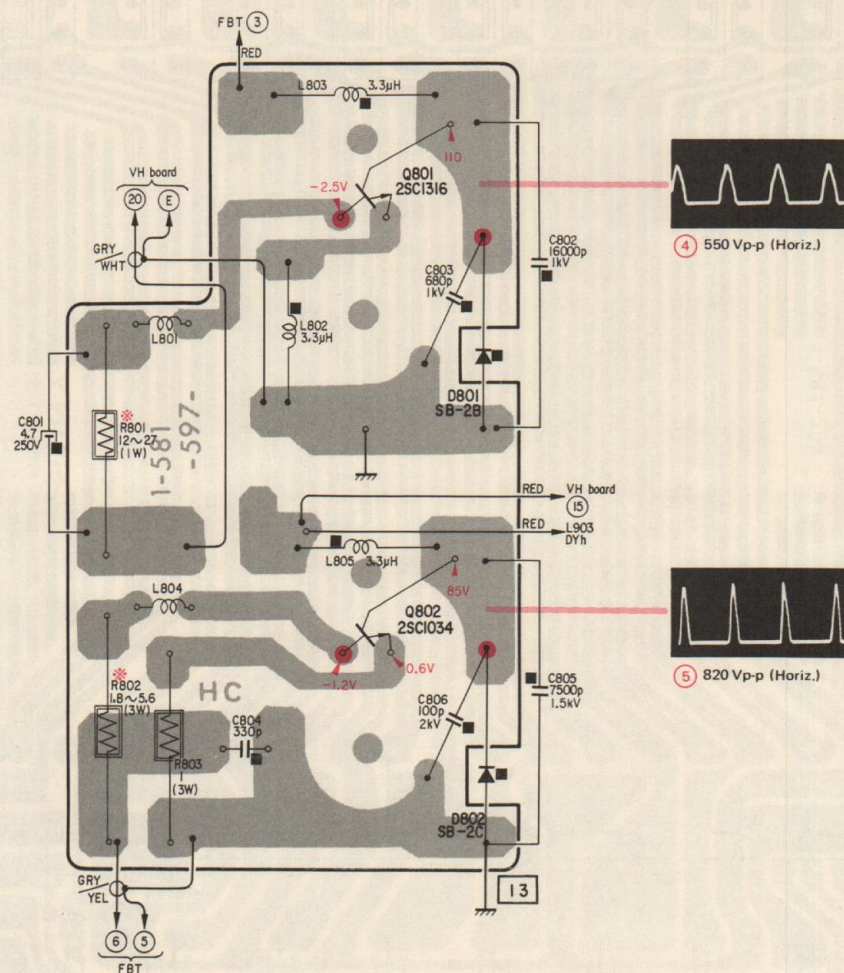


2SC1127

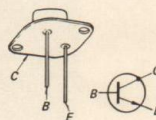




— HC Board —



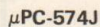
2SC1034  
2SC1316



SB-2B  
SB-2C

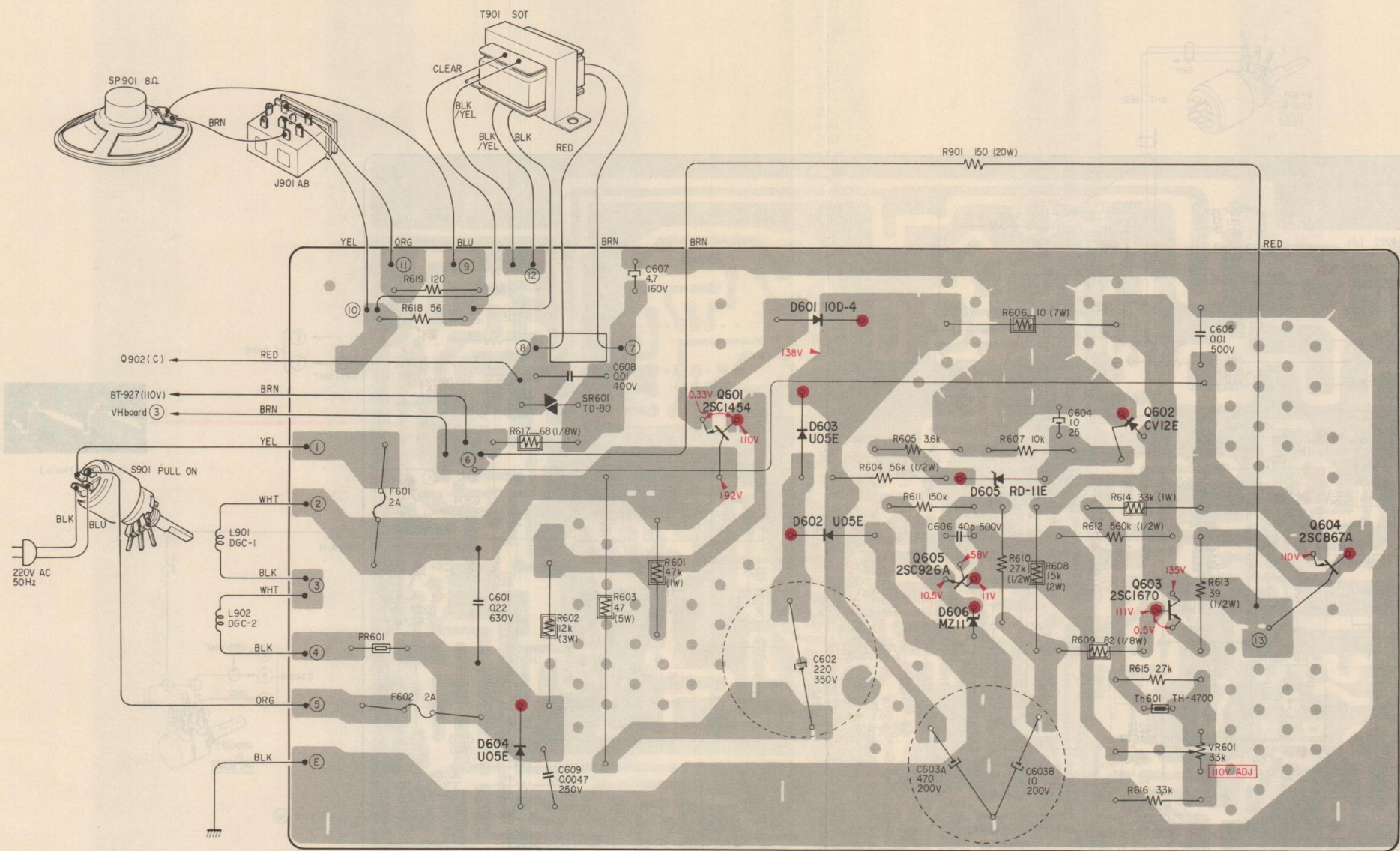




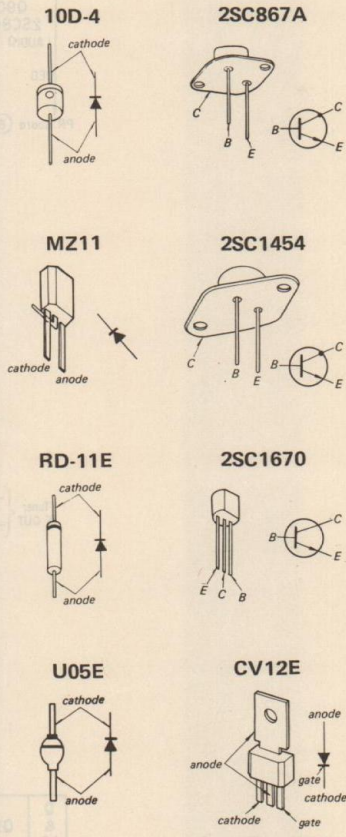




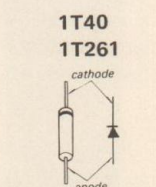
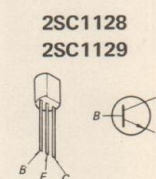
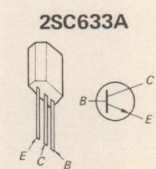
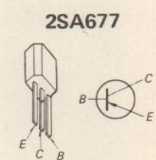
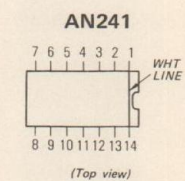
— PR Board —



Q	Q601			Q602		Q604
D	D604	D601 D603 D602		D605 D606		
ADJ						VR601

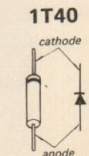






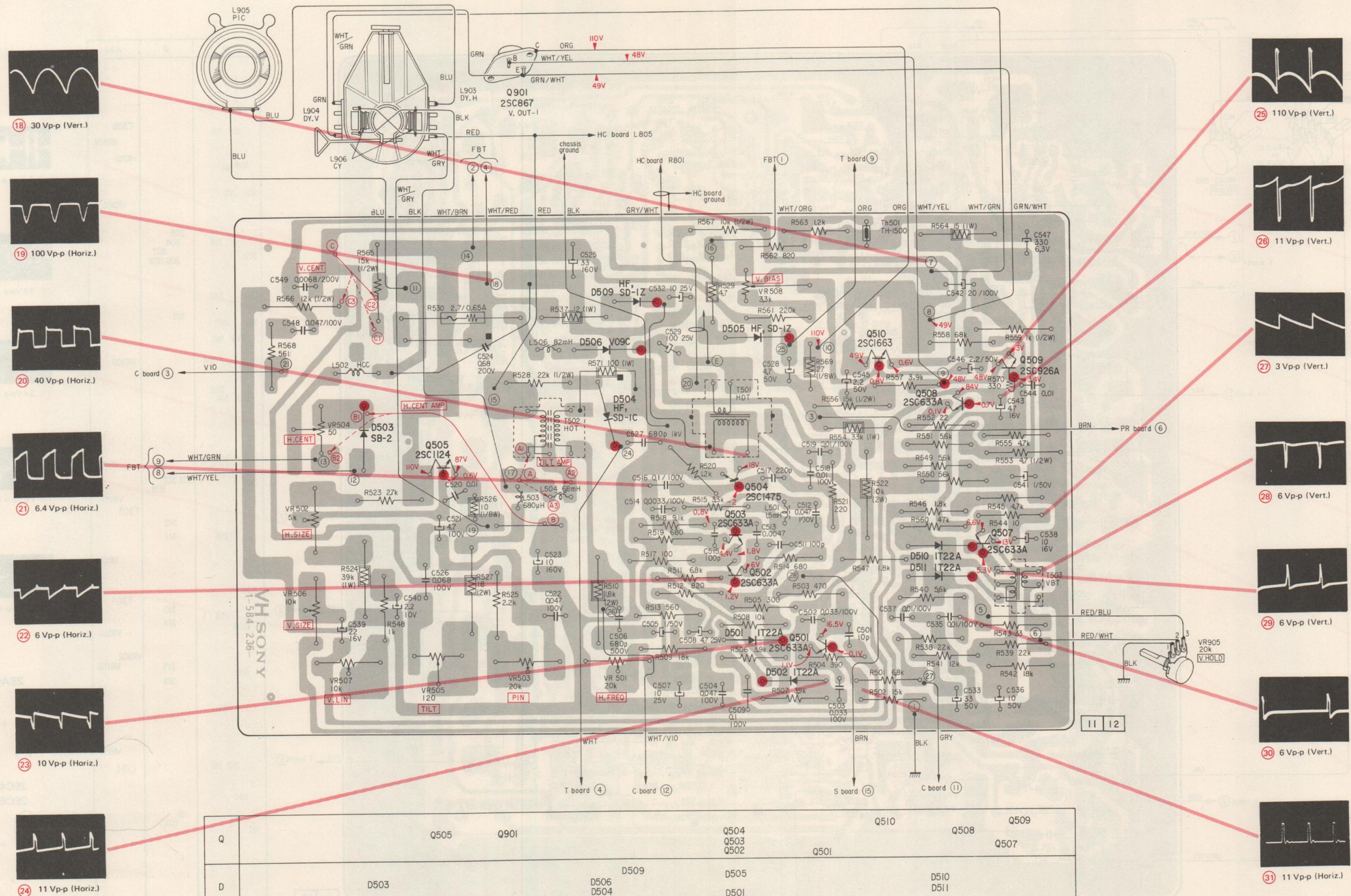
— 29 —





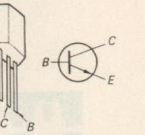


— VH Board —

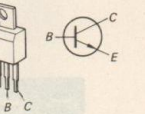


Q	Q505	Q901	Q504 Q503 Q502	Q510	Q508	Q509
D	D503	D509	D506 D504	D505 D501 D502	D510 D511	D507
ADJ	VR504 VR502 VR506	VR507	VR505	VR503	VR501	VR508

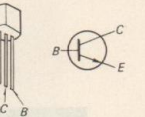
2SC633A  
2SC926A



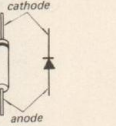
2SC1124  
2SC1663



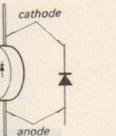
2SC1475



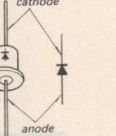
T22A



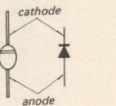
IF.SD-1C  
IF.SD-1Z



SB-2



709C





2ie schema

2N3866

12V

2k $\Omega$

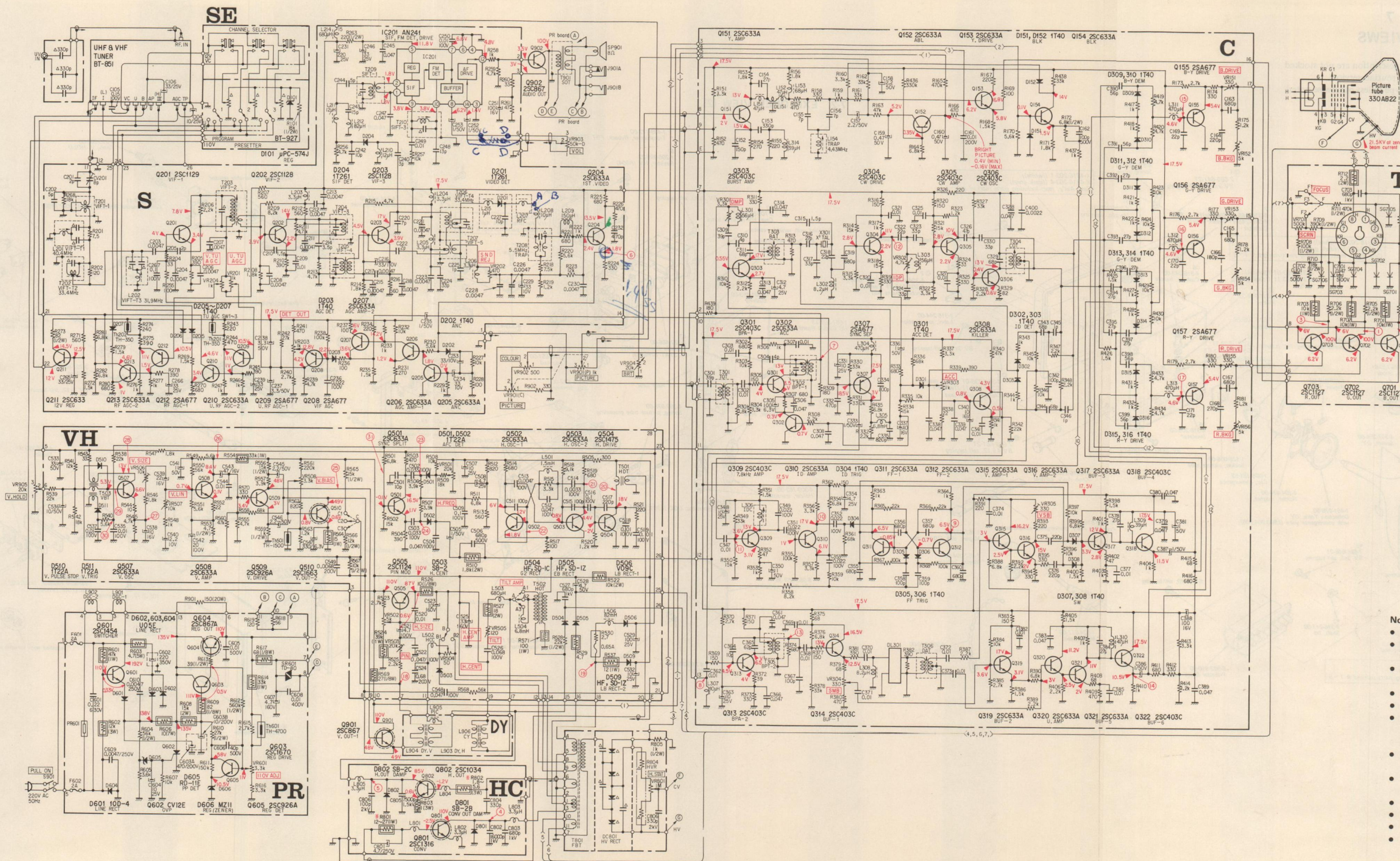
10 $\mu$ F

1k $\Omega$




60 $\Omega$

10 $\mu$ F

Video in



**Note:**

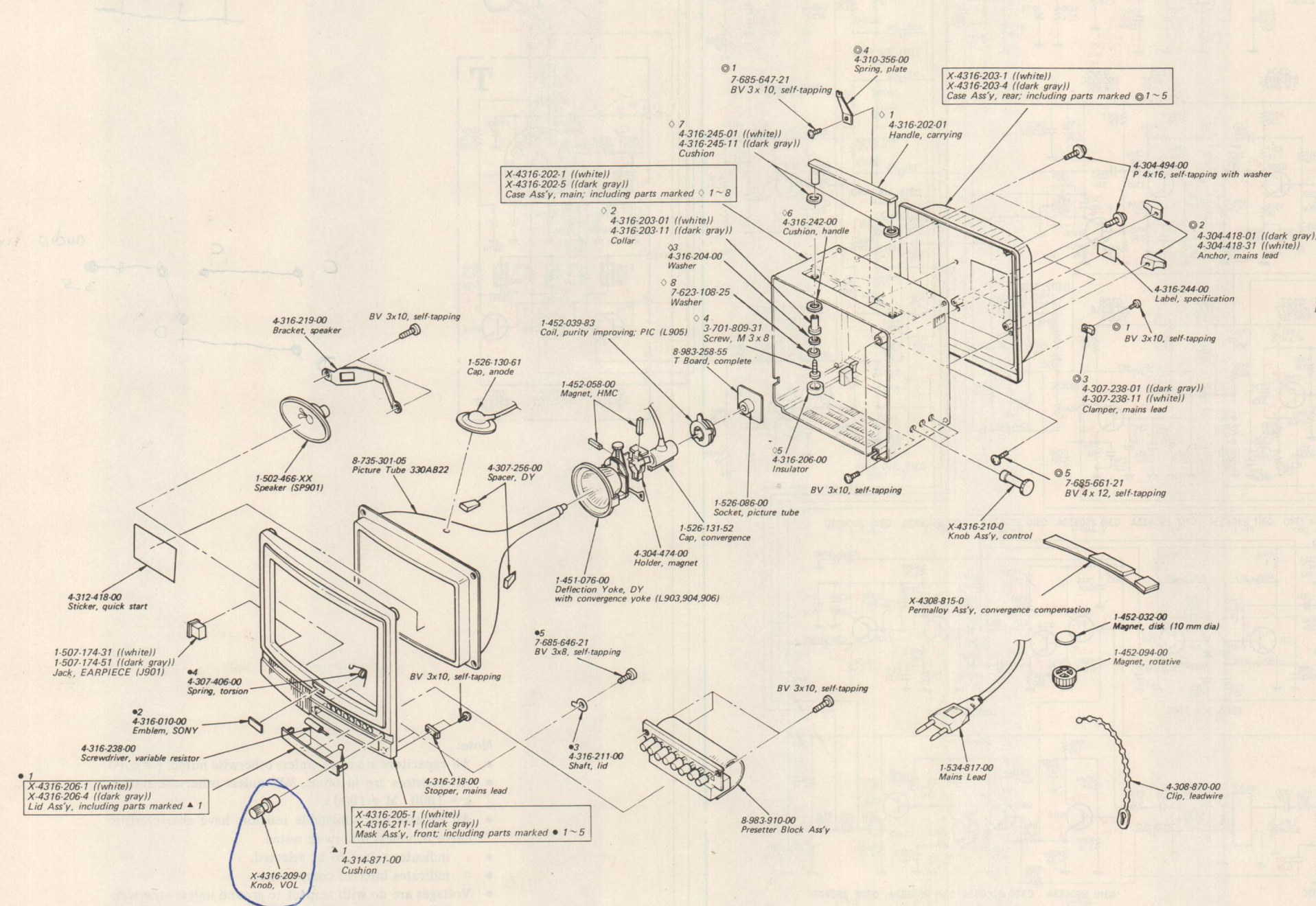
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $p = \mu\text{F}$ .
- All resistors are in ohms,  $\frac{1}{2}W$  unless otherwise noted.  
 $k = 1000 \quad M = 1000 k$
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- \* indicates values to be selected.
- $\Delta$  indicates internal components.
- Voltages are dc with respect to ground unless otherwise noted. Readings are with a colour-bar signal applied. Readings are taken with a 20,000-ohm-per-volt VOM.
- Voltage variations may be noted due to normal production tolerances.
- The circled numbers ( ① ~ ③① ) refer to waveforms shown on mounting diagrams.
-  indicates chassis ground.
-  indicates a nonflammable resistor.
-  indicates a fusible resistor.
- VR903 and S901 are coupled.



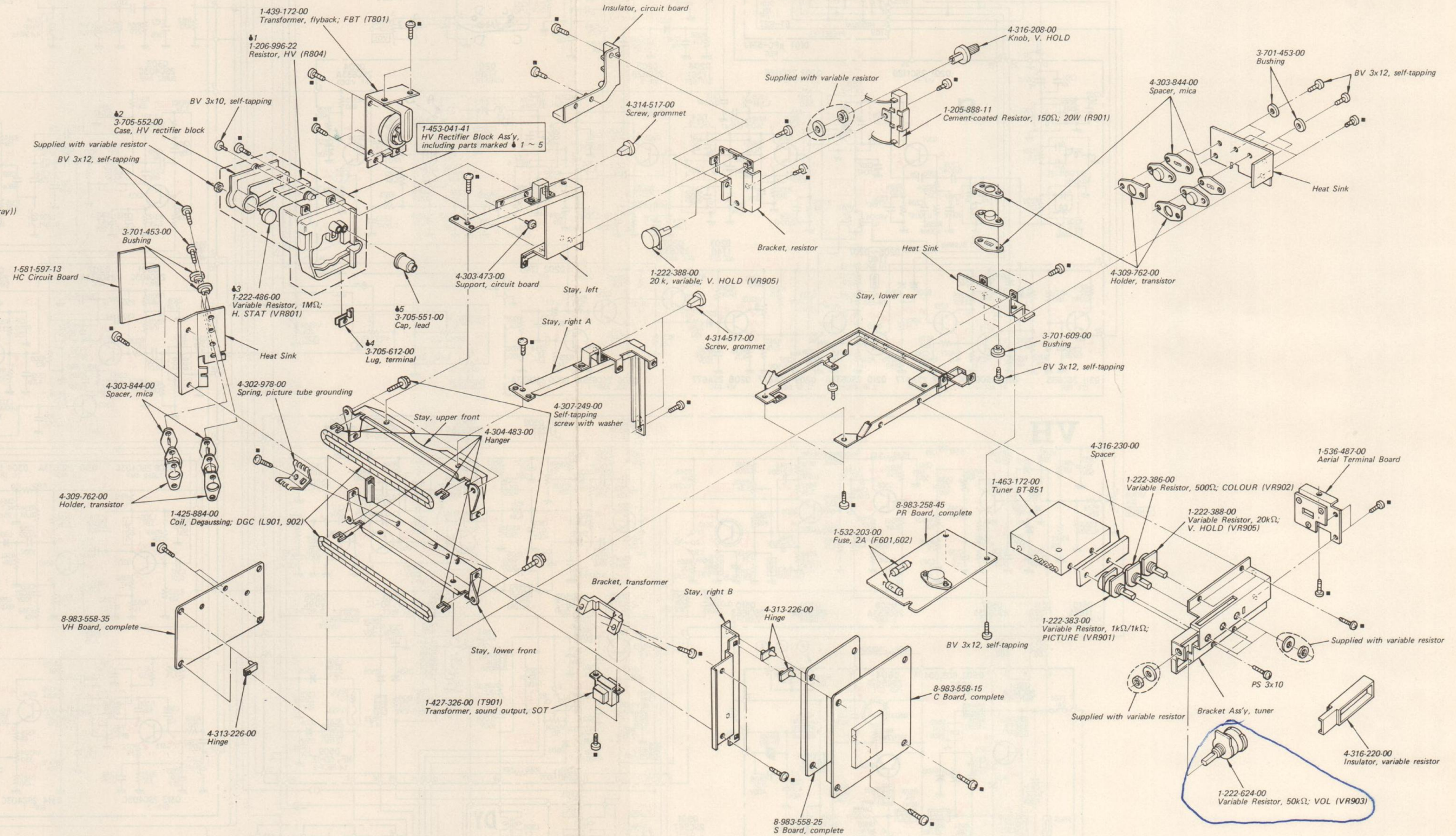
## SECTION 7 EXPLODED VIEWS

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are phillips (cross recess) type unless otherwise noted.

7-1. EXPLODED VIEW (1)



7-2. EXPLODED VIEW (2)



Note: ■: BV 3x8, self-tapping



## SECTION 8

### ELECTRICAL PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
<b>TUNER AND CIRCUIT BOARDS</b>			Q308	2SC633A	
			Q309	2SC403C	
1-463-172-00	Tuner BT-851		Q310 }		
1-581-597-00	HC Circuit Board		Q312 }	2SC633A	
8-983-258-45	PR Board, complete		Q313 }		
8-983-258-55	T Board, complete		Q314 }	2SC403C	
8-983-558-15	C Board, complete				
8-983-558-25	S Board, complete		Q315 }		
8-983-558-35	VH Board, complete		Q317 }	2SC633A	
8-983-910-00	Presetter Block Ass'y				
<b>SEMICONDUCTORS</b>			Q318	2SC403C	
<b>Transistors</b>			Q319 }		
			Q321 }	2SC633A	
			Q322	2SC403C	
Q151 }	2SC633A		Q501 }		
Q154 }			Q502 }	2SC633A	
Q155 }			Q503 }		
Q157 }	2SA677				
Q201	2SC1129		Q504	2SC1475	
Q202 }			Q505	2SC1124	
Q203 }	2SC1128		Q507 }		
			Q508 }	2SC633A	
Q204 }			Q509	2SC926A	
Q207 }	2SC633A		Q510	2SC1663	
			Q601	2SC1454	
Q208 }			Q602	CV12E	
Q209 }	2SA677		Q603	2SC1670	
Q210 }			Q604	2SC867A	
Q211 }	2SC633A		Q605	2SC926A	
Q212	2SA677		Q701 }		
Q213	2SC633A		Q703 }	2SC1127	
Q301	2SC403C				
Q302	2SC633A		Q801	2SC1316	
Q303 }			Q802	2SC1034	
Q306 }	2SC403C				
Q307	2SA677		Q901 }		
			Q902 }	2SC867	



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
Diodes			Miscellaneous		
D101	μpc-574J		Th201 } Th202 }	1-800-071-XX	Thermistor TH-350
D151 } D152 }	1T40		Th501	1-800-069-XX	Thermistor TH-1500
D201	1T261		Th601	1-800-070-XX	Thermistor TH-4700
D202 } D203 }	1T40		PR601	1-800-275-00	Thermistor (positive)
D204	1T261		SR601	1-800-032-00	Varistor TD-80
D205 } D207 }	1T40		COILS		
D301 } D316 }	1T40		All coils are microinductor unless otherwise noted.		
D501 } D502 }	1T22A		L151 } L152 }	1-407-165-XX	47 μH
D503	SB-2		L153	1-407-167-XX	68 μH
D504	HF.SD-1C		L154	1-409-193-00	4.43 MHz TRAP
D505	HF.SD-1Z		L201	1-409-214-00	VIFT-T1, 40.4 MHz
D506	V09C		L202	1-409-215-00	VIFT-T3, 31.9 MHz
D509	HF.SD-1Z		L203 } L206 }	1-407-184-XX	3.3 μH
D510 } D511 }	1T22A		L207	1-425-504-00	RFC
D601	10D-4		L208	1-407-157-XX	10 μH
D602 } D604 }	U05E		L209	1-407-171-XX	150 μH
D605	RD-11E		L210 } L211 }	1-407-158-XX	12 μH
D606	MZ11		L212	1-407-168-XX	82 μH
D801	SB-2B		L214	1-407-193-XX	680 μH
D802	SB-2C		L215	1-407-178-XX	1 μH
IC			L301	1-407-166-XX	56 μH
IC201	AN241		L302	1-407-189-XX	8.2 μH
			L303	1-407-166-XX	56 μH
			L304	1-407-191-XX	470 μH
			L305	1-407-204-XX	6.8 mH

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
L 306	1-407-240-00	Identification, IDC	T 301	1-425-678-00	Take-off, TOT
L 307	1-407-157-XX	10 μH	T 302	1-403-845-00	Band Pass, BPT-1
L 308	1-407-189-XX	8.2 μH	T 303	1-405-372-00	Burst Amplifier, BAT
L 309	1-407-164-XX	39 μH	T 304	1-425-618-00	CW Oscillator, COT
L 310	1-407-165-XX	47 μH	T 305	1-425-883-00	Band Pass, BPT-2
L 311 } L 313 }	1-407-191-XX	470 μH	T 306	1-425-832-00	Delay Adjust, DAT
L 314	1-407-164-XX	39 μH	T 501	1-437-062-00	Horizontal Drive, HDT
L 501	1-407-213-XX	1.5 mH	T 502	1-439-137-00	Horizontal Output, HOT
L 502	1-459-074-00	Horizontal Centering, HCC	T 503	1-435-008-00	Vertical Blocking, VBT
L 503	1-407-193-XX	680 μH	T 801	1-439-172-00	Flyback, FBT
L 504	1-407-204-XX	6.8 mH	T 901	1-427-326-00	Sound Output, SOT
L 506	1-407-168-XX	82 mH	CAPACITORS		
L 801	1-407-364-00	Spook Choke	All capacitors are in μF, 50 V, of ceramic unless otherwise noted. p = μμF, elect = electrolytic		
L802 } L803 }	1-407-364-00	3.3 μH, spook choke	C 104	1-121-398-11	10 25 V elect
L 804	1-407-364-00	Spook Choke	C 105	1-108-640-11	0.15 100 V mylar
L 805	1-407-364-00	3.3 μH, spook choke	C 106	1-121-404-11	33 25 V elect
L 901	1-425-884-00	Degaussing, DGC-1	C 152	1-101-361-11	150 p
L 902	1-425-884-00	Degaussing, DGC-2	C 153	1-102-820-11	330 p
L 903 } L 904 }	1-451-076-00	Deflection Yoke, DY with convergence yoke	C 154	1-102-961-11	27 p
L 906 } L 905 }	1-452-039-83	Purity Improving, PIC	C 155 } C 156 }	1-102-662-11	7 p
DL151	1-415-047-00	Delay Line	C 157 } C 158 }	1-121-450-11	2.2 50 V elect
DL301	1-425-075-00	Delay Line	C 159 } C 160 }	1-121-726-11	0.47 50 V elect
TRANSFORMERS			C 161	1-108-692-11	0.01 200 V mylar
T 201	1-403-728-00	VIFT-1	C 162	1-101-810-11	100 p 500 V
T 202	1-409-217-00	VIFT-T2, 33.4 MHz	C 163	1-102-116-11	680 p
T 203	1-403-729-00	VIFT-2	C 164	1-102-978-11	220 p
T 204	1-403-841-00	VIFT-3	C 165	1-102-116-11	680 p
T 205	1-403-729-00	VIFT-4	C 166	1-102-976-11	180 p
T 206	1-409-273-00	VIFT-T4, 33.4 MHz	C 167	1-102-116-11	680 p
T 207	1-403-730-00	VIFT-5	C 168	1-102-980-11	270 p
T 208	1-409-235-00	5.5 MHz TRAP			
T 209	1-403-842-00	SIFT-1			
T 210	1-403-843-00	SIFT-3			



Ref. No.	Part No.	Description
C169 } C171 }	1-102-959-11	22p
C201	1-102-935-11	2p
C202	1-102-856-11	5p
C203 } C204 }	1-101-003-11	0.0047
C205	1-102-935-11	2p
C206 } C208 }	1-101-003-11	0.0047
C209	1-101-004-11	0.01
C210	1-101-576-11	1.5p
C211 } C213 }	1-101-003-11	0.0047
C214	1-101-552-11	3.5p
C215	1-101-003-11	0.0047
C216	1-121-402-11	33 10V elect
C217 } C218 }	1-101-003-11	0.0047
C220	1-102-662-11	7p
C221	1-101-003-11	0.0047
C222	1-102-935-11	2p
C223	1-101-003-11	0.0047
C224	1-102-963-11	33p
C225	1-102-934-11	1p
C226	1-101-003-11	0.0047
C227	1-102-947-11	10p
C228	1-101-003-11	0.0047
C229	1-121-402-11	33 10V elect
C230	1-101-003-11	0.0047
C231	1-121-422-11	220 25V elect
C232	1-102-098-11	470p
C233 } C234 }	1-121-402-11	33 10V elect
C235	1-121-391-11	1 50V elect
C236	1-108-630-11	0.022 100V mylar
C237 } C238 }	1-121-393-11	3.3 50V elect

Ref. No.	Part No.	Description
C239	1-121-404-11	33 25V elect
C240	1-102-940-11	3p
C242	1-102-947-11	10p
C243	1-102-951-11	15p
C244	1-102-942-11	5p
C245	1-101-006-11	0.047
C246	1-121-404-11	33 25V elect
C247	1-101-006-11	0.047
C248	1-101-667-11	13p
C249	1-101-004-11	0.01
C250	1-108-626-11	0.01 100V mylar
C251	1-121-415-11	100 16V elect
C252 } C253 }	1-121-391-11	1 50V elect
C265 } C266 }	1-121-404-11	33 25V elect
C267	1-108-638-11	0.1 100V mylar
C301	1-102-889-11	39p
C302 } C303 }	1-101-004-11	0.01
C304	1-102-941-11	4p
C305	1-121-413-11	100 6.3V elect
C306	1-101-006-11	0.047
C307	1-101-004-11	0.01
C308	1-101-006-11	0.047
C309	1-102-965-11	39p
C310	1-102-941-11	4p
C311	1-102-676-11	68p
C312	1-121-395-11	4.7 25V elect
C313 } C314 }	1-101-006-11	0.047
C315	1-101-576-11	1.5p
C316	1-102-961-11	27p
C317	1-102-963-11	33p
C318	1-102-959-11	22p
C319	1-102-116-11	680p
C320	1-101-004-11	0.01
C321	1-101-004-11	0.01
C322	1-102-959-11	22p

Ref. No.	Part No.	Description
C323 } C324 }	1-102-963-11	33p
C325	1-101-004-11	0.01
C326	1-101-880-11	47p
C327	1-101-004-11	0.01
C328	1-101-006-11	0.047
C329	1-102-676-11	68p
C330	1-102-963-11	33p
C331	1-121-398-11	10 25V elect
C332	1-102-824-11	470p
C333	1-121-391-11	1 50V elect
C334	1-102-973-11	100p
C335	1-102-117-11	820p
C336	1-121-391-11	1 50V elect
C337	1-121-651-11	10 16V elect
C338 } C339 }	1-101-006-11	0.047
C340	1-121-651-11	10 16V elect
C341	1-101-004-11	0.01
C342	1-102-973-11	100p
C343 } C344 }	1-101-888-11	68p
C345 } C346 }	1-102-934-11	1p
C347	1-101-004-11	0.01
C348	1-121-398-11	10 25V elect
C349	1-108-630-11	0.022 100V mylar
C350	1-121-391-11	1 50V elect
C351 } C353 }	1-108-630-11	0.022 100V mylar
C354	1-121-395-11	4.7 25V elect
C355 } C357 }	1-102-116-11	680p
C358 } C359 }	1-102-973-11	100p
C360	1-102-116-11	680p
C361	1-101-006-11	0.047
C362	1-101-004-11	0.01

Ref. No.	Part No.	Description
C363	1-121-398-11	10 25V elect
C364	1-102-947-11	10p
C365	1-102-849-11	62p
C366	1-101-006-11	0.047
C367	1-102-678-11	100p
C368 } C374 }	1-101-004-11	0.01
C375 } C376 }	1-102-978-11	220p
C377	1-101-004-11	0.01
C378	1-102-961-11	27p
C379 } C380 }	1-101-006-11	0.047
C381	1-121-391-11	1 50V elect
C382	1-101-004-11	0.01
C383	1-101-006-11	0.047
C384	1-102-961-11	27p
C385	1-101-004-11	0.01
C386 } C387 }	1-121-391-11	1 50V elect
C388	1-121-415-11	100 16V elect
C389	1-101-006-11	0.047
C390	1-101-884-11	56p
C391	1-101-884-11	56p
C392 } C397 }	1-101-961-11	27p
C398 } C399 }	1-101-884-11	56p
C400	1-102-100-11	0.0022
C501	1-102-947-11	10p
C502 } C503 }	1-108-632-11	0.033 100V mylar
C504	1-108-634-11	0.047 100V mylar
C505	1-121-391-11	1 50V elect
C506	1-102-002-11	680p 500V
C507	1-121-398-11	10 25V elect
C508	1-121-395-11	4.7 25V elect
C509	1-108-638-11	0.1 100V mylar



Ref. No.	Part No.	Description
C511	1-102-973-11	100p
C512	1-106-212-12	0.047 100V mylar
C513	1-106-188-12	0.0047 100V mylar
C514	1-106-184-12	0.0033 100V mylar
C515	1-102-973-11	100p
C516	1-108-638-11	0.1 100V mylar
C517	1-102-978-11	220p
C518	1-108-626-11	0.01 100V mylar
C519		
C520	1-101-004-11	0.01
C521	1-121-918-11	4.7 100V elect
C522	1-108-634-11	0.047 100V mylar
C523	1-121-921-11	10 160V elect
C524	1-108-549-11	0.68 200V mylar
C525	1-123-024-11	33 160V elect
C526	1-108-636-11	0.068 100V mylar
C527	1-102-219-11	680p 1kV
C528	1-121-396-11	4.7 50V elect
C529	1-121-416-11	100 25V elect
C532	1-121-398-11	10 25V elect
C533	1-121-405-11	33 50V elect
C535	1-108-626-11	0.01 100V mylar
C536	1-121-738-11	10 50V elect
C537	1-108-626-11	0.01 100V mylar
C538	1-131-158-11	10 16V tantalum
C539	1-121-479-11	22 16V elect
C540	1-127-024-11	2.2 10V solid aluminum
C541	1-121-391-11	1 50V elect
C542	1-121-917-11	20 100V elect
C543	1-121-409-11	47 16V elect
C544	1-101-118-11	0.01
C545	1-121-450-11	2.2 50V elect
C546		
C547	1-121-751-11	330 6.3V elect
C548	1-108-634-11	0.047 100V mylar
C549	1-108-690-11	0.0068 200V mylar
C601	1-129-996-11	0.22 630V polyethylene
C602	1-125-094-11	220 350V elect
C603	1-125-074-12	470/10 200V elect (block)
C604	1-121-398-11	10 25V elect

Ref. No.	Part No.	Description
C605	1-101-823-11	0.01 500V
C606	1-101-807-11	40p 500V
C607	1-121-246-11	4.7 160V elect
C608	1-105-953-12	0.01 400V mylar
C609	1-102-240-11	0.0047 250V
C701	1-119-327-11	0.47 500V elect
C702	1-102-050-11	0.01 500V
C703	1-102-219-11	680p 1kV
C801	1-121-759-11	4.7 250V elect
C802	1-129-885-11	16,000p 1kV polyethylene
C803	1-102-219-11	680p 1kV
C804	1-102-820-11	330p
C805	1-129-936-11	7500p 1.5kV polyethylene
C806	1-102-153-11	100p 2kV
CV201	1-141-138-00	8p trimmer
RESISTORS		
All resistors are in ohms. Regular-type 1/4W carbon resistors are omitted. Check schematic diagram for values. k = 1000 M = 1000 k		
R101	1-244-903-11	18k 1/2W carbon
R172	1-244-893-11	6.8k 1/2W carbon
R263	1-244-857-11	220 1/2W carbon
R273	1-244-847-11	82 1/2W carbon
R510	1-206-670-11	1.8k 2W metal oxide (nonflammable)
R522	1-206-688-11	10k 2W metal oxide (nonflammable)
R524	1-213-162-11	39k 1W metal oxide (nonflammable)
R326	1-211-409-11	10 1/8W carbon (nonflammable)
R327	1-206-469-11	18 2W metal oxide (nonflammable)
R528	1-202-605-11	22k 1/2W composition
R529	1-211-490-11	4.7 1/4W carbon (nonflammable)
R530	1-207-982-11	2.7 0.65A fusible

Ref. No.	Part No.	Description
R537	1-212-373-11	12 1W metal oxide (nonflammable)
R553	1-207-471-11	4.7 1/2W wirewound
R554	1-213-161-11	33k 1W metal oxide (nonflammable)
R556	1-244-901-11	15k 1/2W carbon
R559	1-244-873-11	1k 1/2W carbon
R564	1-212-374-11	15 1W metal oxide (nonflammable)
R565	1-244-901-11	15k 1/2W carbon
R566	1-244-899-11	12k 1/2W carbon
R567	1-244-897-11	10k 1/2W carbon
R569	1-211-932-11	27 1/8W carbon (nonflammable)
R571	1-213-131-11	100 1W metal oxide (nonflammable)
R601	1-213-163-11	47k 1W metal oxide (nonflammable)
R602	1-206-751-11	12k 3W metal oxide (nonflammable)
R603	1-217-178-11	4.7 5W wirewound (nonflammable)
R604	1-244-915-11	56k 1/2W carbon
R606	1-217-333-11	10 7W wirewound (nonflammable)
R608	1-206-692-11	15k 2W metal oxide (nonflammable)
R609	1-211-929-11	82 1/8W carbon (nonflammable)
R610	1-244-907-11	27k 1/2W carbon
R612	1-202-639-11	560k 1/2W composition
R613	1-244-839-11	39 1/2W carbon
R614	1-213-161-11	33k 1W metal oxide (nonflammable)
R617	1-211-931-11	68 1/8W carbon (nonflammable)
R701	1-206-104-11	10k 1W metal oxide (nonflammable)
R703		
R704		
R706	1-202-581-11	2.2k 1/2W composition

Ref. No.	Part No.	Description
R707	1-202-629-11	220k 1/2W composition
R708	1-202-621-11	100k 1/2W composition
R709	1-202-635-11	390k 1/2W composition
R710	1-202-603-11	18k 1/2W composition
R711	1-202-637-11	470k 1/2W composition
R712	1-206-447-11	2.2 2W metal oxide (nonflammable)
* R801	1-212-373-11	12 1W metal oxide (nonflammable)
	1-212-374-11	15 1W metal oxide (nonflammable)
	1-212-375-11	18 1W metal oxide (nonflammable)
	1-213-124-11	27 1W metal oxide (nonflammable)
* R802	1-206-916-11	1.8 3W metal oxide (nonflammable)
	1-206-918-11	2.7 3W metal oxide (nonflammable)
	1-206-921-11	4.7 3W metal oxide (nonflammable)
	1-206-922-11	5.6 3W metal oxide (nonflammable)
R803	1-217-007-11	1 3W wirewound (nonflammable)
R804	1-206-996-22	HVR
R805	1-202-573-11	1k 1/2W composition
R901	1-205-888-11	150 20W cement-coated
VR151	1-224-640-XX	330, adjustable; B.DRIVE
VR152	1-221-389-XX	5k, adjustable; B.BKG
VR153	1-224-640-XX	330, adjustable; G.DRIVE
VR154	1-221-389-XX	5k, adjustable; G.BKG
VR155	1-224-640-XX	330, adjustable; R.DRIVE
VR156	1-221-389-XX	5k, adjustable; R.BKG
VR201	1-224-642-XX	1k, adjustable; U.TU AGC
VR202	1-224-641-XX	470, adjustable; SND REJ
VR203	1-224-642-XX	1k, adjustable; DET OUT
VR204	1-224-642-XX	1k, adjustable; V.TU AGC
VR301	1-224-644-XX	3.3k, adjustable; DMP
VR302	1-224-644-XX	4.7k, adjustable; IDP

\* : to be selected



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
VR 303	1-224-642-XX	1 k, adjustable; ACC
VR 304	1-224-640-XX	330, adjustable; SMB
VR 305	1-224-640-XX	330, adjustable; VSB
VR 501	1-222-807-XX	20 k, adjustable; H.FREQ
VR 502	1-221-389-XX	5 k, adjustable; H.SIZE
VR 503	1-222-807-XX	20 k, adjustable; PIN
VR 504	1-223-017-00	50 k, adjustable; H.CENT
VR 505	1-223-067-00	120, adjustable; TILT
VR 506	1-222-512-00	10 k, adjustable; V.SIZE
VR 507	1-222-512-00	10 k, adjustable; V.LIN
VR 508	1-224-644-XX	3.3 k, adjustable; V.BIAS
VR 601	1-224-644-XX	3.3 k, adjustable; 110 V ADJ
VR 701	1-222-809-00	500 k, adjustable; SCR.N
VR 801	1-222-486-00	1 M, adjustable; H.STAT
VR 901	1-222-383-00	1 k/1 k, variable; PICTURE
VR 902	1-222-386-00	500, variable; COLOUR
VR 903 } S901 }	1-222-624-00	50 k-D, variable; VOL
VR 904	1-222-388-00	20 k, variable; BRT
VR 905	1-222-388-00	20 k, variable; V.HOLD

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
<b>MISCELLANEOUS</b>		
DC801	1-453-041-41	HV Rectifier Block Ass'y
	including:	
R804	1-206-996-22	Resistor, HVR
VR801	1-222-486-00	Resistor, 1 M $\Omega$ ; adjustable; H.STAT
	3-705-551-00	Cap, lead
	3-705-552-00	Case, HV block
	3-705-612-00	Lug, terminal
F601 } F602 }	1-532-203-00	Fuse, 2A
J901A,B	1-507-174-33	Jack, EARPIECE
SG701 } SG706 }	1-519-063-XX	Spark Gap 1.5 kV
SP901	1-502-466-XX	Speaker, 8 $\Omega$
X301	1-527-183-00	Crystal
	1-452-032-00	Magnet, disk (10 mm dia)
	1-452-058-00	Magnet, HMC
	1-452-094-11	Magnet, rotative
	1-526-086-XX	Socket, picture tube
	1-526-130-XX	Cap, anode
	1-526-131-52	Cap, convergence
	1-534-817-XX	Mains Lead
	1-536-487-00	Aerial Terminal Board
	8-735-301-05	Picture Tube 330AB22

#### ACCESSORIES AND PACKING MATERIALS

<u>Part No.</u>	<u>Description</u>
1-504-034-32	Earpiece ME-20B
3-701-329-01	Label, color; cabinet (dark gray)
3-701-330-01	Label, color; cabinet (white)
3-701-352-00	Bag, polyethylene
4-316-239-00	Carton
4-316-240-00	Cushion, right
4-316-241-00	Cushion, left
4-316-243-00	Sheet, protection
4-495-514-11	Manual, instruction

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